

# Comparisons of Job Characteristics

**Focus Occupation:** Environmental Science and Protection Technicians, Including Health (19-4091)

**Associated Occupation:** Environmental Engineers (17-2081)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

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<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 74

**Focus Occupation:** Environmental Science and Protection Technicians, Including Health (19-4091)

**Associated Occupation:** Environmental Engineers (17-2081)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	21.7	9.7	<<	Extensive education and/or training may be required
Design	5.2	17.2	7.1	<<	Extensive education and/or training may be required
Mathematics	9.2	16.3	12.3	<<	Extensive education and/or training may be required
Chemistry	4.8	15.8	13.2	<	Expanded education and/or training may be required
Physics	4.3	15.7	9.9	<<	Extensive education and/or training may be required
Law and Government	5.9	13.6	9.8	<<	Extensive education and/or training may be required
Building and Construction	4.0	13.0	6.8	<<	Extensive education and/or training may be required
Public Safety and Security	6.9	12.0	11.1	0	Current knowledge level may be sufficient
Biology	3.7	10.0	11.4	>	Current knowledge level is likely sufficient
Transportation	4.6	9.0	5.7	<<	Extensive education and/or training may be required
Geography	3.9	8.3	9.7	>	Current knowledge level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 85

**Focus Occupation:** Environmental Science and Protection Technicians, Including Health (19-4091)

**Associated Occupation:** Environmental Engineers (17-2081)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Reading Comprehension	10.7	16.4	12.8	<<	Extensive development of skills in this area may be required
Critical Thinking	10.8	14.5	12.3	<	A higher skill level may be required
Complex Problem Solving	9.1	13.9	9.6	<<	Extensive development of skills in this area may be required
Judgment and Decision Making	9.4	13.9	10.0	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	13.1	8.6	<<	Extensive development of skills in this area may be required
Mathematics	6.2	12.3	9.2	<<	Extensive development of skills in this area may be required
Systems Evaluation	6.4	11.7	8.6	<<	Extensive development of skills in this area may be required
Science	4.5	11.4	10.3	<	A higher skill level may be required
Operations Analysis	5.0	11.0	7.9	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	10.4	7.2	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	7.2	3.1	<<	Extensive development of skills in this area may be required
Programming	2.2	5.6	1.8	<<	Extensive development of skills in this area may be required
Technology Design	2.6	5.5	2.6	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 89

**Focus Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)**  
**Associated Occupation: Environmental Engineers (17-2081)**

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Problem Sensitivity	11.1	17.0	11.9	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	16.2	11.8	<<	Extensive improvement in abilities may be required
Oral Comprehension	12.5	16.1	13.5	<	Some improvement in abilities may be required
Written Comprehension	11.0	16.0	13.9	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	15.4	11.4	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	14.2	11.1	<<	Extensive improvement in abilities may be required
Category Flexibility	9.0	13.6	9.5	<<	Extensive improvement in abilities may be required
Flexibility of Closure	7.8	13.5	9.3	<<	Extensive improvement in abilities may be required

Mathematical Reasoning	6.3	13.4	9.1	<<	Extensive improvement in abilities may be required
Perceptual Speed	7.4	11.9	8.5	<<	Extensive improvement in abilities may be required
Speed of Closure	5.9	11.2	6.2	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 82

**Focus Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)**  
**Associated Occupation: Environmental Engineers (17-2081)**

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Advise clients or customers	19
Advise governmental or industrial personnel	28
Analyze ecosystem data	69
Analyze scientific research data or investigative findings	27
Collect scientific or technical data	30
Communicate technical information	4
Compile numerical or statistical data	38
Confer with scientists	54
Create mathematical or statistical diagrams or charts	43
Develop or maintain databases	30
Develop plans for programs or projects	31
Develop policies, procedures, methods, or standards	21
Develop tables depicting data	33
Direct and coordinate activities of workers or staff	3
Explain complex mathematical information	30
Follow safe waste disposal procedures	50
Prepare environmental impact or related environmental reports	81
Prepare reports	8
Prepare safety reports	60
Prepare technical reports or related documentation	22
Test air quality, noise, temperature, or radiation	82
Use computers to enter, access or retrieve data	3
Use government regulations	44
Use hazardous disposal techniques	80
Use hazardous materials information	35
Use knowledge of investigation techniques	16
Use mathematical or statistical methods to identify or analyze problems	30
Use pollution control techniques	62
Use quantitative research methods	35
Use relational database software	26

Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 81

**Focus Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)**  
**Associated Occupation: Environmental Engineers (17-2081)**

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Chemical evaluation instruments and supplies	10
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Fluid mechanics equipment	11
Gas analyzers and monitors	10
Hydrological instruments	31
Industry specific software	1
Information exchange software	1
Laboratory centrifuges and accessories	13
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Metals and metallurgy and structural materials testing instruments	15
Network applications software	1
Pumps	9
Sampling equipment	12
Soil measuring equipment	20
Spectroscopic equipment	10
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.